

## Claims

1. Method for operating a mobile radio telephone system, in which
  - a power amplifier (PA1, PA2) for amplifying the signals (S1, S2) to be transmitted to subscriber stations (MS1, MS2) is provided
  - and a dimension (M1, M2) for the working load of the power amplifier is detected and transmitted to a central control unit (RNC) of the mobile radio telephone system.
2. Method according to claim 1, in which
  - the power amplifier (PA1, PA2) is located in a radio cell (C) of the mobile radio system
  - and the central control unit (RNC) is located outside the radio cell.
3. Method according to one of the preceding claims, in which the dimension (M1; M2) for the working load of the power amplifier (PA1; PA2) is dependent both on the output power (P1, P2) currently made available by the power amplifier and on the maximum admissible output power (P1max, P2max) of the power amplifier.
4. Method according to one of the preceding claims, in which
  - a number of power amplifiers (PA1, PA2) for amplifying the signals (S1, S2) to be transmitted to the subscriber stations (MS1, MS2) is provided
  - and at least one dimension (MPA, M1, M2) for the working load of the power amplifier is detected.
5. Method according to claim 4, in which

a dimension (M1, M2) for the working load of each of the power amplifiers (PA1, PA2) is detected.

6. Method according to claim 5, in which it is determined which dimension (M1, M2) of the working load of the power amplifiers (PA1, PA2) has the greatest value, said dimension (MPA) with the greatest value being transmitted to the central control unit (RNC).

7. Method according to claim 5 or 6, in which

- in addition to the at least one dimension (M1, M2) of the working load of the power amplifier, a dimension (MC) of the working load of a radio cell (C) is also detected in which the power amplifier (PA1, PA2) is located.

- and the dimension (MC) of the working load of the radio cell is similarly transmitted to the central control unit (RNC).

8. Method according to claim 7, in which

the dimension (MC) of the working load of the radio cell (C) is dependent both on the sum of the output powers (P1, P2) currently made available by all power amplifiers (PA1, PA2) of the radio cell, and also on a maximum admissible sum of the output powers (PCmax) of the power amplifiers.

9. Method according to claim 7 or 8, in which

- it is determined whether the dimension (M1, M2) of the working load of one of the power amplifiers (PA1, PA2) or the dimension (MC) of the working load of the radio cell (c) has a greater value,

- and either the dimension of the working load of this power amplifier or the dimension of the working load of the

radio cell is transmitted to the central control unit (RNC) as a function of this result.

10. Method according to one of the preceding claims, in which a decision is made on a distribution of signals (S1, S2) to be transmitted on the power amplifier (PA1, PA2) in consideration of the dimensions of the working load transmitted to the central control unit (RNC).

11. Mobile radio telephone system

- with at least one power amplifier (PA1, PA2) for amplifying signals (S1, S2) to be transmitted to the subscriber stations (MS1, MS2),
- with a unit for detecting a dimension (M1, M2) for the working load of the power amplifier
- and with a unit for transmitting the dimension to a central control unit (RNC) of the mobile radio system.

12. Base station (BS) for a mobile radio system,

- with at least one power amplifier (PA1, PA2) for amplifying signals (S1, S2) to be transmitted to subscriber stations (MS1, MS2)
- with a unit for detecting a dimension (M1, M2) for the working load of the power amplifier
- and with a unit for transmitting the dimension to a central control unit (RNC) of the mobile radio telephone system.